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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/060,236	02/01/2002	William Brent Wilson	P21748	8492

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EXAMINER	
AN, SHAWN S	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 12/31/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/060,236	WILSON, WILLIAM BRENT	
	Examiner	Art Unit	
	Shawn S An	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *14-20* is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Remarks

1. Applicant's arguments filed on 10/8/03 with respect to claims 1-13 have been considered but are moot in part in view of the new ground(s) of rejection.

Applicants argue that Stifle's reference fails to teach determining a throttling amount to control computational processing requirements of the decoder.

In response, the Examiner wishes to clarify that A) Liu et al discloses measuring of computational processing power required to decode bitstream of video data (Col. 11, lines 43-56) and measuring of decoder's processing capability (Col. 4, lines 22-26), and B) Stifle et al teaches **specifically,** a decoder throttling device (Fig. 1, 110) for determining a throttling amount without requiring encoded throttling control data associated with the video data (Col. 11, lines 46-54).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing Liu et al's reference to incorporate the concept of determining decoder's **throttling amount** as taught by Stifle et al so as to control computational processing requirements of the decoder based on the throttling amount, thereby reducing an amount of processing performed on the decoded video data prior to displaying a picture, **without requiring encoded throttling control data associated with the video data**, so that one or more bitstreams can be decoded in a way to result in certain visual quality as needed.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4-5, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al (5,680,482) in view of Stifle et al (4,633,462).

Regarding claims 1 and 5, Liu et al discloses a method of reducing processing power requirements of a video decoder, and a system for processing video data, comprising:

a decoder (Fig. 2, 10) for decoding video data; and

measuring of processing power required to decode bitstream of video data (Col. 11, lines 43-56) and measuring of decoder's processing capability (Col. 4, lines 22-26).

Liu et al does not particularly disclose controlling computational processing requirements of a decoder based on the throttling amount, comprising reducing an amount of processing performed on the decoded video data prior to displaying a picture, without requiring encoded throttling control data associated with the video data.

However, Stifle et al teaches a decoder throttling device (Fig. 1, 110) for determining a throttling amount without requiring encoded throttling control data associated with the video data (Col. 11, lines 46-54).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing Liu et al's reference to incorporate the concept of determining decoder's throttling amount as taught by Stifle et al so as to control computational processing requirements of the decoder based on the throttling amount, thereby reducing an amount of processing performed on the decoded video data prior to displaying a picture, without requiring encoded throttling control data associated with the video data, so that one or more bitstreams can be decoded in a way to result in certain visual quality as needed.

Regarding claims 4 and 8, Liu et al discloses measuring an indication/type of an amount of processing required for the bitstream (Col. 4, lines 22-26).

4. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al (5,680,482) in view of Stifle et al (4,633,462) and Boyce et al (5,635,985).

Regarding claims 9-10 and 12, Liu et al discloses a method of reducing processing power requirements of a video decoder, and a system for processing video data, comprising:

a decoder (Fig. 2, 10) for decoding video data; and

measuring of processing power required to decode bitstream of video data (Col. 11, lines 43-56) and measuring of decoder's processing capability (Col. 4, lines 22-26).

Liu et al does not particularly disclose controlling computational processing requirements of a decoder based on the throttling amount without requiring encoded throttling control data associated with the video data, comprising reducing the number of coefficients inverse quantized and inverse DCT transformed by selectively setting coefficients to alternate values.

However, Stifle et al teaches a decoder throttling device (Fig. 1, 110) for determining a throttling amount without requiring encoded throttling control data associated with the video data (Col. 11, lines 46-54).

Boyce et al teaches reducing the number of coefficients inverse quantized and inverse DCT transformed by selectively setting coefficients to alternate values (Fig. 1, 126; col. 10, lines 13-24) in order to make the downstream processing of these coefficients less computationally intensive.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing Liu et al's reference to incorporate the concept of determining decoder's throttling amount as taught by Stifle et al so as to control computational processing requirements of the decoder based on the throttling amount without requiring encoded throttling control data associated with the video data, so that one or more bitstreams can be decoded in a way to result in certain visual quality as needed, and also incorporate the concept of reducing the number of coefficients inverse quantized and inverse DCT transformed by selectively setting coefficients to

alternate values as taught by Boyce et al in order to make the downstream processing of these coefficients less computationally intensive.

Regarding claims 11 and 13, Liu et al discloses measuring an indication/type of an amount of processing required for the bitstream (Col. 4, lines 22-26).

5. Claims 2-3 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al and Stifle et al as applied to claims 1 and 5 above, respectively, and further in view of Malladi et al. (5,818,532).

Regarding claims 2-3 and 6-7, The combination of Liu et al and Stifle et al does not particularly disclose limiting a function of at least one post filter or one format conversion filter.

However, Malladi et al discloses reducing the processing power used for one or more decoder function by limiting decoder function (Col. 20, lines 31-36 and lines 44-47) in a predetermined manner to reduce the computational requirements of decoding a bitstream.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art to employing Liu et al's reference to incorporate the concept of reducing the processing power by limiting the decoder function as taught by Malladi so as to apply the concept in a conventionally well known post filter or format conversion filter to reduce the computational requirements of decoding a bitstream.

Allowable Subject Matter

6. Claims 14-20 are allowed as previously discussed the last Official action as Paper 3.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number (703) 305-0099 and schedule are Tuesday-Friday.

SHAWN S. AN
PATENT EXAMINER

SSA

December 23, 2003